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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/762,191	01/20/2004	Douglas B. Noyes	81686/7442	2474

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EXAMINER

KEASEL, ERIC S

ART UNIT PAPER NUMBER

3754

DATE MAILED: 01/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/762,191

Applicant(s)

NOYES ET AL.

Examiner

Eric Keasel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6-28, 30-47, 49 and 50 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-28, 30-47, 49 and 50 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on January 20, 2004 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-4, 6-28, 30-47, 49, and 50 are rejected under 35 U.S.C. 102(e) as being anticipated by France et al. (US Patent Number 6,244,566).

France et al. disclose a shut-off valve assembly comprising: a hollow valve body having a first opening (21) and a second opening (22); a valve seat (35) positioned within the hollow valve body proximate to the first opening; a first diaphragm assembly (60), wherein a deflectable portion of the first diaphragm assembly is attached to an interior surface of the hollow valve body forming a first volume between the valve seat and the first diaphragm assembly; a second diaphragm (70) attached to another portion of the interior of the hollow valve body and attached to the first diaphragm assembly such that a second volume is defined between the second diaphragm and the second opening, wherein a third volume is formed between the first diaphragm assembly and the second diaphragm, the third volume sealed from the first volume and the second volume by the first diaphragm assembly and the second diaphragm; at least one flow hole (57) formed in the first diaphragm assembly, wherein the at least flow one hole allows a process flow to flow between the first volume and the second volume; and a self-aligning head assembly comprising: a flexible stem (50) attached at a first end to another portion of the first

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diaphragm assembly; and a valve head (54, 55) coupled to a second end of the stem; wherein a deflection of the deflectable portion of the first diaphragm assembly and the second diaphragm allows the other portion of first diaphragm assembly to move in order to open and close the valve head from the valve seat; wherein the valve head comprises a floating valve head (54, 55) held in position between the second end of the stem and the valve seat by the second end of the stem; wherein the valve head comprises a poppet wherein at least a portion (55) of the poppet is spherical; wherein the process flow generally flows in-line through the hollow valve body between the first opening and the second opening via the first volume and the second volume; further comprising a mechanical actuator assembly coupled to the first diaphragm assembly and the second diaphragm for causing the deflection of the deflectable portion of the first diaphragm assembly and the second diaphragm, and substantially contained within an external footprint of the hollow valve body providing an actuating force axial to the movement of the process flow through the hollow valve body; wherein the actuator assembly variably deflects the deflectable portion of the first diaphragm assembly and the second diaphragm which moves the other portion of the first diaphragm assembly a variable distance, such that the position of the valve head relative to the valve seat is variably selectable, wherein giving the shut-off valve assembly capabilities of a proportional valve assembly; wherein the deflectable portion comprises a ring portion and the other portion of the first diaphragm assembly comprises a sleeve portion (connected to part 56); wherein the actuator assembly further comprises a washer (72) positioned within the third volume and surrounding the sleeve portion, wherein the washer indirectly contacts the second diaphragm; wherein the actuator assembly further comprises a spring (78) within the third volume located between the second diaphragm and a first side of the washer,

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wherein the spring contacts the second diaphragm and the first side of the washer and exerts pressure against the first side of the washer, wherein the first diaphragm assembly is held such that the valve head is sealed into the valve seat; further comprises an actuator member coupled to an actuator, wherein upon operation of the actuator, the actuator member applies a force against a second side of the washer, causing the washer to deflect the second diaphragm and the ring portion of the first diaphragm assembly in an opposite direction as held by the spring, wherein the valve head is caused to unseal from the valve seat; wherein the actuator member comprises a ball (71) held between the actuator and the washer; wherein the actuator comprises a ring having a detent (48, 84), wherein the actuator member sits within the detent, wherein upon rotation of the actuator, the actuator member is forced out of the detent such that the actuator member applies pressure against the second side of the washer.

Re the valve head is adapted to self-align into the valve seat with a leak rate of less than or equal to 4×10^{-9} atmosphere cc of Helium/sec (and also at temperatures up to 1000 degrees centigrade), this parameter is dependent on many unclaimed and undisclosed variables (e.g. the relative and absolute pressures upstream and downstream of the valve seat and the presence of Helium in the flow path). Both applicant's valve and the valve of France et al. will meet this limitation under certain circumstances (e.g. a vacuum on both sides of the valve seat or no Helium in the flow path); thus France et al. anticipate this limitation. However, at very high pressure differences of Helium upstream and downstream of the valve seat, then neither valve (applicant's or France et al.) would likely meet this limitation.

Re the surface area of the deflectable portion of the first diaphragm assembly facing the first volume is approximately equal to the surface area of the second diaphragm facing the

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second volume, such that a first force exerted on the deflectable portion by the process flow in the first volume substantially cancels the force in the opposite direction exerted on the second diaphragm by the process flow in the second volume, wherein the first diaphragm assembly and the second diaphragm are substantially balanced with respect to the pressure of the process flow, France et al. does not explicitly state this; however, the drawing shows these features within the bounds of broadly worded "approximately" and "substantially".

Terminal Disclaimer

3. The terminal disclaimer filed on Sept 26, 2005 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of US Patent Number 6,679,476 has been reviewed and is NOT accepted.

4. The assignee has not established its ownership interest in the patent, in order to support the terminal disclaimer. There is no submission in the record establishing the ownership interest by either (a) providing documentary evidence of a chain of title from the original inventor(s) to the assignee, or (b) specifying (by reel and frame number) where such documentary evidence is recorded in the Office (37 CFR 3.73(b)).

Double Patenting

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

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A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 1, 19, 33, and 50 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 20, and 35 of U.S. Patent No. 6,679,476. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 1, 20, and 35 of U.S. Patent No. 6,679,476 contain all the limitations of claims 1 (and 50), 19, and 33 (respectively) of the present application.

Response to Arguments

7. Applicant's arguments filed September 26, 2005 have been fully considered but they are not persuasive.

Applicant argues that France et al. do not disclose a flow hole in the diaphragm (70). The examiner disagrees. There is clearly a hole in the center of the diaphragm that allows flow to channel (57). Applicant then argues that the poppet/stem of France et al. has an internal passage (57) that allows flow, while applicant's disclosed invention does not have an internal passage in the poppet/stem. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Keasel whose telephone number is (571) 272-4929. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Mar can be reached on (571) 272-4906. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Eric Keasel". The signature is fluid and cursive, with the first name "Eric" and last name "Keasel" clearly distinguishable.

Eric Keasel
Primary Examiner
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